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Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVIII DECEMBER, 1948 No. 10

NICKELS AND DIMES AND THE SCHOOL CHILD'S DIET

ALLA P. MEREDITH, *Nutritionist*
Nutrition Section, States Relations Division,
U. S. Public Health Service

That American children spend a considerable sum of money for candy, chewing gum, soda pop, and similar treats is no news to anyone who deals with children; but do you know how much Junior's sweet tooth is costing in terms of his health as well as his money?

A study of Florida school children conducted by the U. S. Public Health Service indicated that the price is high enough to warrant more serious efforts on the part of educators and parents to see that children do not use these luxuries as a substitute for the basic foods essential to normal growth and development.

The study is based on interviews with 530 school children of Alachua County, Florida. Carefully selected to represent a true cross section of the elementary and high school population of a typical Southern community, the children came from families of all income groups and were about equally divided between white and Negro and between rural and urban schools. The white children ranged in age from 9 to 18 years; the Negro children, from 9 to 22 years.

To find out exactly what foods these children consumed in one day, nutritionists asked each child, upon his arrival at school, what he had eaten since arising that morning. The child was interviewed again after lunch and the following morning in order to complete a 24-hour period. Dishes and wax food models—potatoes, meats, vegetables, etc., in varying sizes were used to help him indicate amount of foods as accurately as possible. Great precaution was taken not to ask suggestive questions which might influence the validity of the answers.

Prices of luxury foods which the children had purchased were checked at the nearby stores. Deductions were made for any portion of the product the child did not eat. For example, if a child shared at 10-cent candy bar with another, he was reported as spending only 5 cents. Foods of the "snack" variety brought from

can be shaped to meet special local needs. Moreover the survey itself arouses the interest of parents, educators, and children and stimulates them to work together for better health through better nutrition.

TABLE I

MONEY SPENT ON "SNACKS" BY SCHOOL CHILDREN IN ALACHUA COUNTY, FLORIDA, OCTOBER AND NOVEMBER, 1946, BY COLOR

MONEY SPENT (in cents)	CHILDREN SPENDING SPECIFIED AMOUNTS					
	ALL CHILDREN		WHITE		NEGRO	
	Number	Percent	Number	Percent	Number	Percent
Total	530	100	269	100	261	100
0	159	30.0	108	40.2	51	19.5
1-4	49	9.2	35	13.0	14	5.4
5-9	123	23.2	61	22.7	62	23.8
10-14	90	17.0	28	10.4	62	23.8
15-19	50	9.5	18	6.7	32	12.2
20-Over	59	11.1	19	7.0	40	15.3
10 and Over	199	37.6	65	24.1	134	51.3

TABLE II

CONSUMPTION OF MILK AND MILK DRINKS — CITRUS AND CITRUS JUICE BY SCHOOL CHILDREN WHO SPENT TEN CENTS OR MORE PER DAY ON "SNACKS" IN ALACHUA COUNTY, FLORIDA, OCTOBER AND NOVEMBER, 1946, BY COLOR

FOODS CONSUMED*	CHILDREN SPENDING 10c OR MORE PER DAY					
	ALL CHILDREN		WHITE		NEGRO	
	Number	Percent	Number	Percent	Number	Percent
Total	199	100	65	100	134	100
Milk or Milk Drink						
None	57	28.6	12	18.5	45	33.6
Less than one cup	78	39.2	20	30.8	58	43.3
Less than two cups	131	65.8	35	53.9	96	71.6
Citrus Fruit or Juice						
None	146	73.4	50	77.0	96	71.6
Milk or Citrus						
Less than 1 serving	62	31.2	19	29.2	43	32.1

ACKNOWLEDGMENTS

Appreciation is expressed to the following for assistance and cooperation in this study:

Dr. F. M. Hall, Alachua County Health Officer;
Members of the staff of the Alachua County Health Department;
Mr. Howard Bishop, Superintendent, Department of Public Instruction, Alachua County;
Principals and teachers of the schools in which this study was conducted.

WHAT THE DES MOINES HIGH SCHOOLS HAVE DONE, MORE HIGH SCHOOLS CAN DO

By ELVIRA L. GRABOW, R.N.
Bureau of Dental Hygiene, Iowa State Department of Health

A report on the findings of a survey in the high schools of Des Moines by the Director of the Division of Dental Hygiene in cooperation with the school administrators. Dr. C. H. Henshaw is the supervisor of the Des Moines Public School's Dental Program, while Dr. O. E. Hoffman is the Director of the Division of Dental Hygiene, Iowa State Department of Health. N. D. McCombs is the Superintendent of Schools.

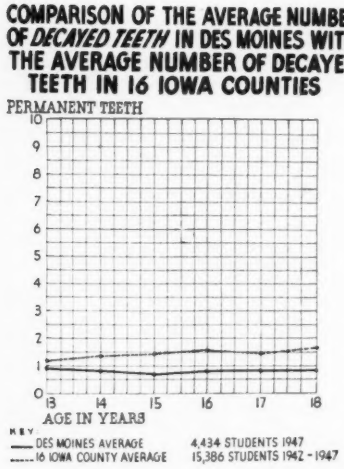
One of the oldest dental health programs in the state is that in the schools of Des Moines, Iowa, functioning under the direction of the school dentist. It was therefore with interest and enthusiasm that the Director of the Division of Dental Hygiene, Iowa State Department of Health, responded to a call from the school dentist to examine the teeth of the high school students in the fall of 1947. Dr. Henshaw believed that the condition of the teeth was above average, and he was eager to learn if this were true. The school program is chiefly an educational one, although service is available to indigents at the City Health Center. The facility is not adequate to meet all needs. The survey, however, revealed that the high school students had met their needs fairly well as shown by the tables and graphs.

SUMMARY OF THE DENTAL STATUS
OF DES MOINES HIGH SCHOOL STUDENTS

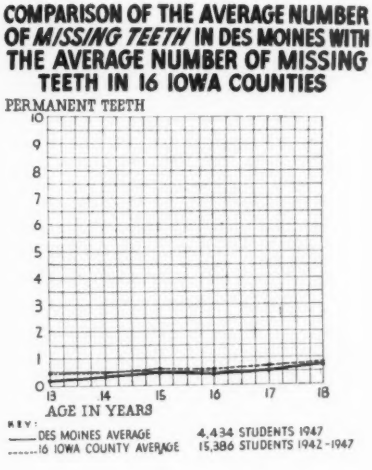
Age, last birthday	13	14	15	16	17	18	19	20	Total	Average per Student
Number examined	13	250	1,180	1,507	1,220	235	24	5	4,434	
Number of pupils with no decayed, missing or filled teeth	5	44	145	168	112	24	4	0	502	
NUMBER OF PERMANENT TEETH										
Decayed, requiring fillings*	12	198	771	1,119	917	188	21	2	3,228	
Missing**	3	102	481	659	620	186	18	5	2,074	
Filled	22	795	4,816	6,600	5,800	1,019	120	31	19,203	
Decayed, missing and filled***	37	1,082	6,008	8,256	7,228	1,379	157	38	24,185	
AVERAGE NUMBER OF PERMANENT TEETH PER CHILD										
Decayed, requiring fillings*	0.92	0.79	0.65	0.74	0.75	0.80	0.87	0.40		0.73
Missing**	0.23	0.41	0.41	0.44	0.51	0.79	0.75	1.00		0.47
Filled	1.69	3.18	4.08	4.79	4.75	4.34	5.00	6.20		4.33
Decayed, missing and filled***	2.85	4.33	5.09	5.48	5.92	5.87	6.54	7.60		5.45

*All teeth with one or more untreated carious areas except those teeth indicated for extraction.
**Extracted teeth and teeth indicated for extraction.
***Decayed, missing and filled teeth. A tooth both decayed and filled is counted as one D.M.F. tooth.

It was most gratifying to learn that only 29.72 per cent of the 4,434 students examined were in need of dental care. Since the national average for high school students is estimated at 90 per cent, the record is very good. The study further revealed that the average number of teeth which required fillings per pupil was less than one tooth, or 0.728, while the state average was 1.36. See Graph 1. The number of decayed teeth of the Des Moines students in each age group is well below that of the average for the students in sixteen counties. One hundred thirty-six high schools are included in the latter study. The latter surveys were made by the same examiner during the last six years and are available if desired.



Graph 1

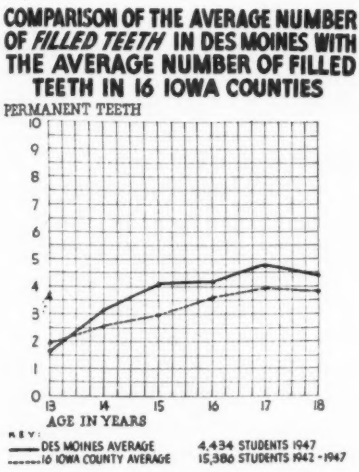


Graph 2

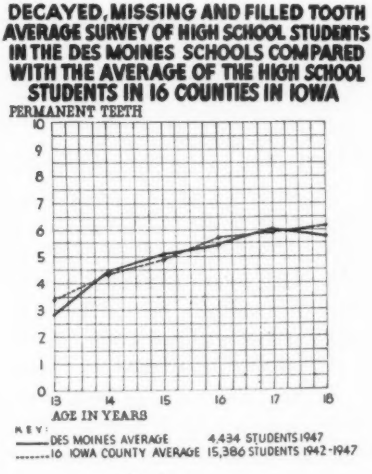
The missing tooth rate was 0.467 as compared with the state average of 0.505. See Graph 2.

The effectiveness of the dental health educational program in Des Moines was further indicated by the large number of filled teeth, 4.33, as compared with the state average of 2.89. See Graph 3.

The total Decayed, Missing and Filled tooth rate for the various age groups is shown in Graph 4



Graph 3



Graph 4

What has brought about the reduction in the number of decayed teeth, the low rate of missing teeth and the large number of filled teeth? Decay has not been prevented, but it has been controlled. This has been accomplished through a dental health program based on the three principles, education, prevention, and correction. After continuous stimulation of the student during his attendance in the elementary grades and the further integration of dental health in the science and physical education courses in the high school, the preceding results have been achieved. The dental health program, if it is to be successful, must be a continuous one and not a sporadic, hit-or-miss affair. Sustained effort over periods of years brings about the desired result.

The school administration became aware of the dental health problem in 1916 when the dentists in Des Moines conducted a survey of all school children. Conditions were described as "bad". So the next year a dentist was employed by the Board of Education for nine hours a week at a central clinic. It soon became apparent that the hours of the dentist should be increased and hygienists were added to the staff. In 1925-1926 the personnel consisted of a part-time dentist as supervisor, a full-time dentist and assistant, and two hygienists. In two years the hygienists completed the

examinations and the cleaning of the teeth for all grade school children. By 1925, 54.9 per cent of the pupils had received dental treatment as compared with 8.50 per cent in 1916.[1]

In 1926 the following program was adopted:

1. Annual examination of pupils in the first seven grades with parent notification if care is indicated.
2. Cleaning, follow-up and instruction in oral hygiene by the hygienists.
3. Follow-up by nurses and physical education teachers.[2]

Since the above program has been in effect for twenty-two years, the students in high school at present have had the benefit of the program throughout their entire school career. The percentage of twelfth grade students in need of care over a ten-year period is indicated below:

1937	1938	1940	1941	1942	1943	1944	1945	1946	1947
48.50	48.00	51.34	48.25	46.30	49.00	40.70	46.00	41.50	29.72

The program has been a success because students and parents were educated to the need for dental care, facilities for such care were available, and parents had the economic resources to pay for such care.

While the number of surveys in the high school age group in the state is limited, several are available for comparison. All of the surveys listed below were made by dentists during the school year 1947-48. Mouth mirrors and explorer points were used in making the examinations. All the schools have had a dental health educational program over a long period of time. While these reports may serve as a basis for comparison, two differences should be borne in mind: (1) The examiners for each survey were different. (2) The set-up in the schools is somewhat different: The first two schools have a school dentist as well as nursing services, Indianola has a school nurse, and Webster County has a rural public health nursing service.

School	Grades Included	No. of Pupils	Percentage Needing Care	Active Since	Ratio of Dentists to the Civilian Population in County, 1-1-48
Polk County					
Des Moines	10-12	4,434	29.7	1916	1:1332
Cerro Gordo County					
Mason City[3]	10-12	818	25.4	1929	1:1480
Warren County					
Indianola[4]	10-12	250	32.	1927	1:3539
Webster County[5]	10-12	247	58.8	1930	1:1384
Dayton					
Burnside					
Duncombe					
Harcourt					
Lehigh					
Otho					

Summary

The report indicates that the dental health educational program in Des Moines high schools, carried out under trained leadership and guidance, has been an effective means to obtain dental care for the high school age group and that the end achieved has been possible because of the longe-range program to which the pupil was exposed. Further there is indication of a carry-over value in the high school from the intensive program promoted in the elementary grades.

The survey indicates that the high school students in Des Moines had met their dental needs fairly well and that there was no great accumulation of decayed teeth awaiting dental attention. The findings were most favorable, namely; an average of 0.728 decayed teeth, 0.467 missing teeth, 4.33 filled teeth in Des Moines as compared with an average of 1.36, 0.505 and 2.89 respectively in the sixteen counties of the state.

Finally due credit must be given, not only to the dentist supervisor and dental hygienists, but also to the school nursing staff, the principals, the classroom teachers, the local dentists, the parents and the pupils, for without the effective cooperation of the entire group, the results would not have been possible.

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2. Ibid.
3. Clack, Nan: School Dental Health Report, 1947-48.
4. Boston, Winifred: School Dental Health Report, 1947-48.
5. Hall, Pearle: School Dental Health Report, 1947-48.

* * * * *

No subject is more intimately connected with the happiness and prosperity of a people than the degree of public health that they enjoy.—LEMUEL SHATTUCK.

* * * * *

Recently the **Maine Public Health Association** sent in a list of 106 communities in the State for whom they will finance annual subscriptions to the Journal of School Health. Is there any other association, group or person who wishes to do as much for their State?

UNIFYING HEALTH SERVICES*

By MAURICE J. THOMAS
Superintendent of Schools, Rochester, Minnesota

"Our experience proves conclusively that much can be gained by pooling resources. It is evident from our experience that childhood is the direct beneficiary of cooperative health and educational services" states Superintendent Thomas in describing the school and community health services, health education, physical education and recreation in Rochester, Minnesota.

The coordinated program has been carried out since the beginning of the school year 1943. The agreement worked out between the executive officers of the Rochester Public Schools and the Rochester Public Health Department was as follows:

1. The City Health Officer is designated as the consultant, advisor, and executive officer for the school health department, responsible in that area to the superintendent of schools, and through him, to the Board of Education.
2. The head school nurse acts as the supervisor of nurses, serving under the direction of the Rochester City Health Officer.
3. All school health matters will be undertaken only with the approval of the superintendent and in harmony with policies approved by the Board of Education.
4. Adequate secretarial assistance shall be provided, paid for jointly by the City of Rochester and the public school system.
5. Adequate offices for all nurses employed under this program shall be provided by the city government of Rochester in one of its centrally located buildings.

The school nursing and health education program continues much as before. Each nurse spends approximately one half of her time with matters primarily arising out of public educational health and nursing service problems.

There is no overlapping on the part of governmental units, specialized agencies, and public education in nursing service in a district. It is all unified through the central office. Entering children and those in the third, sixth, ninth, and eleventh grades receive routine physical examinations by a physician. In the presence of the nurse, the classroom teacher and the mother, the doctor conducts the physical examination and during the course of the examination he counsels the parent and teacher as to the condition of the child and essential procedures to follow where corrective and follow-up technics are required. The teacher is the key to

*An abstract.

this program for at any time she can initiate additional examinations on the part of either the nurse or the physician if she feels that a child in her classroom needs specialized attention.

Rochester, with a population of 35,000 and a school population of over 5,000 children, has an exceptionally large amount of community health services with over 20 qualified staff members in the health department. The director is Dr. Floyd Feldman. There are on his staff 1 director of public health services, 1 nursing supervisor, 3 city nurses, 3 school nurses, 2 nurses employed by the State Board of Health, 6 nurses employed by funds provided by the W. K. Kellogg Foundation, 5 student nurses from the University of Minnesota, (obtaining field experience), consultant services from the University of Minnesota, 6 secretaries, and from the Mayo Clinic, 2 physicians, several fellows in the section on pediatrics, 1 director and assistant in the Child Health Project, 1 child psychiatrist, 1 child health nutritionist, 1 director of preschool activities, a statistician, and a secretary employed under the Rochester Child Health Project. A specialist in health curricula has been employed with funds provided by the W. K. Kellogg Foundation.

Wherever nursing service and health education touch the school, they are directly under the jurisdiction of the superintendent of schools who works through the director of public health.

The immunization program vs. smallpox, diphtheria and tetanus is carried out through the schools. There is a tuberculosis education case finding program involved in Mantoux tests with x-rays and necessary followup. The physical education program is varied to meet the needs of the individual children and there is a summer recreation program under the supervision of the superintendent of schools sponsored jointly by the Rochester Park Board and the Rochester Public Schools with 35 staff members, all of whom are public school teachers.

The health education program is carried out through the classroom teachers and is coordinated with the health service and physical education program.

The Rochester Child Health Project sponsored by the Mayo Foundation and the University of Minnesota is under the direction of Dr. C. Anderson Aldrich and Dr. Benjamin Spock. The children are registered at birth in this project and will have expert guidance for a period of 18 years. Already this program is having a particularly beneficial effect upon the kindergarten, and first and second grades. Abstracted from Public Health Nursing. April, 1948, pp. 168-173, by Cyrus H. Maxwell, M.D.

WHY SCHOOL HEALTH EXAMINATIONS?

Through its school health program the Commonwealth of Pennsylvania is developing stronger citizens for the future. Launched in 1945 by the General Assembly of the Commonwealth, this program in operation will be demonstrated for the public throughout the State during the observance of PENNSYLVANIA WEEK, September 26 to October 2, 1948.

The importance of the School Health Law to Pennsylvania's younger generation is explained in this article by John W. German, Jr., Chief of the State Health Department's School Division; and S. J. Dickey, M.D., Medical Consultant of the Division.

Intensive study has shown that many serious physical defects begin to appear in infancy and early childhood. It is important, therefore, that early discovery and correction of these defects should be made in order to prevent them from further developing and becoming serious handicaps to the child's school progress.

The Pennsylvania General Assembly had this in mind when writing Act 425. In Section 8, the following statement appears: *"It is the intent and legislative purpose of this act that a complete and permanent medical and dental record be established and maintained in order to assist in building sound minds and healthy bodies for the youth of Pennsylvania."*

It is a well established fact that a complete physical examination is not made by the average family physician even in adults, unless they insist that it be done. The same holds true in the examination of children. True, when they are acutely ill a more thorough examination may be made. However, examinations made even at this time are not complete and many correctable defects are not discovered until the child enters school.

During the last school year over 850,000 children of school age have had the benefit of a complete physical examination. It is probably safe to say that more than 750,000 of this group have, for the first time, received a complete physical examination since infancy.

In many instances, it is the first time the children have even seen a dentist. The usual routine in rural areas has been to wait until the teeth become decayed or loosened. They are then removed by the never failing "string method." The only time these children see a dentist is when some complication, such as an abscessed tooth, has necessitated a visit to the dentist with painful remembrances of this visit as a result.

Another cause for failure to have complete examination is the matter of expense. Such an examination involves an expenditure of from $15.00 to $25.00. Provisions for such expenditures are

usually not included in the family budget. As a result the examination is postponed or omitted entirely.

If adults are negligent in having complete physical check-ups it applies more commonly in complete examinations of children. For this reason the biennial examination of school children is of great importance. Through this procedure every child now has the benefit of at least a reasonable physical check-up every two years.

Educational Value,—The program may also be made useful from an educational standpoint. The use of many preventive measures can be explained in connection with the school health examination. At that time, when the parents are present, they may be properly instructed on the importance of the use of these preventive measures for control of such diseases as diphtheria, measles, etc. It is not too much to expect that as this educational program becomes more effective, many childhood diseases will ultimately be as completely controlled and outbreaks of these diseases will become as rare as smallpox and typhoid fever have already become.

The program will be useful in making intelligent referrals of certain cases to the proper health agencies operated by the State. Parents and school administrators are rapidly becoming acquainted with the fact that many cases can have care and attention through these agencies.

The success of this program is definitely the responsibility of various individuals and agencies, and all concerned must do their part if the objectives are to be obtained.

1. Parents and school administrators must be convinced of the value of the examination. They must cooperate with the physician and show that they appreciate his service. Parents should participate by being present at the examination to give definite information regarding the past health history of the child. If the parent is unable to be present, all information should be submitted either to the nurse when she visits the home or by completing the form which is provided for this purpose. This data should give a complete history of all past illnesses. Any present conditions, such as discharging ears, recurring sore throats, etc., should be noted. If a child is presently under the care of a physician this should be properly noted and the name of the physician given.
2. It is the duty of the nurse or school administrator to see to it that all such information is properly tabulated on the

Pupils Health Record, and that it is carefully called to the attention of the physician at the time of the examination.

3. It is the duty of the school administrator to so organize his health program that it will motivate proper health instruction through the school. Eventually, such health education and continual pressure by parents, teachers, and other responsible school authorities, will result in a more desirable physical environment of the school plant. As a result, classrooms will be properly illuminated, cheerfully decorated, provided with adequate heat, sanitary toilet facilities, and a safe water supply. In fact school buildings should be made as attractive and clean as any home. When the school buildings and their environment fill these specifications, it will have a very decided bearing on reducing delinquency in school attendance.

Parents Follow Through,—What has been said may seem visionary to the casual reader. A few facts, however, will prove that results are being obtained.

a. All requirements of the act are rapidly being effected. Information coming to the Department of Health from all sections of the State show that many parents are already taking their children to the family physician for consultation about conditions which had never before been discovered and followed up.

b. Through the educational program, many children are themselves becoming more health conscious. They are beginning to discover the value of the examination and frequent consultation with the physician. As these children grow to adults, they will have had the benefit of learning the need for frequently consulting their physician and calling to his attention any conditions which formerly had been neglected.

c. A new outline is being formulated with relation to the first aid program in schools. Nurses and school authorities are being warned of the danger of haphazard medication. They are being shown that medication should not be given unless it has been authorized by a physician.

d. The health education program of the school is being revised. Its scope will be broadened to include sane and intelligent health instruction in the schools. This must be done through the cooperation of the medical personnel and the school administrators. Such a coordinated program

will ultimately develop a group of children with stronger and more graceful bodies.

e. An intensive follow-up and correction of defects found in the school examination will, we feel certain, show results within the next five years. It will be reflected in the decreasing number of absences due to sickness and the reduction of repeaters in the school system which in the past have been caused by correctable physical handicaps.

With complete cooperation among all those interested and a desire to make the program work, the school children will be given an incentive that will, in the end, result in their becoming happier and more useful citizens of the Commonwealth. Reprinted from Pennsylvania's Health, Department of Health. July-September, 1948.

* * * * *

Bilingual Children,—To the Editor: I have been asked to solve the following problem: Should a couple of foreign birth (German) who speak their native language and English equally well, try to teach their child, one year of age, both languages at the same time or teach him the foreign language later at the age of 5 or 6? As there seems to be some doubt as to the ability of the average child to learn two languages, would not an attempt at this lead to (1) retardation of development of speech in both languages; (2) due to the two languages having many similarities, the development of a mixture which may be hard to correct later, or (3) due to the inability to express himself according to his age, emotional maladjustment or even retardation of mental development?—M.D., Ill.

Answer—Prevailing opinion is that the child should be taught the single language: English, during its first five years. While many children can, and do, become bilingual in their early years without difficulty, there is a chance that any particular child might develop neurotic tendencies because of the bilingual pressure. In answer to the specific questions: (1) the average child (one with average intellectual ability and average auditory discrimination) might very well show a retardation or withdrawal from language due to the dual pressure; (2) a mixture of the two languages might occur if the pressure for perfection was severe in the home, leading to a relaxation away from home, and (3) emotional maladjustment might well follow the conflict established in the child's mind by the dual language pressure, though it is questionable whether there would be mental retardation due to the attempt. Journ. A.M.A., April 17, 1948, p. 1074.

LET'S LOOK AT THE RECORD

By A. D. BATTEY
Senior Statistician National Safety Council

During the last several years the National Safety Council has been saying "One out of three children who die is killed in an accident." In 1946 the proportion was even higher—approximately two out of five children who died in 1946 were killed in accidents.

The National Office of Vital Statistics in a recent release gives a total of 32,960 deaths from all causes in 1946 among persons 5 to 19 years old. Of these, 12,342, or 37 per cent of all deaths, were caused by accidents, as compared to 35 per cent in 1945 and 34 per cent in 1941, the last prewar year. However, this increase in the importance of accidents resulted from sharp decreases in deaths from disease, not from increases in fatal accidents. There were, in fact, 916 fewer accidental deaths in 1946 than in 1941.

The second cause of death in 1946 among persons 5 to 19 years old was tuberculosis with a total of 2,693. Heart disease was third with 1,995 deaths.

The accompanying table gives the 1946 record for the important and well-known causes of deaths for each five year age group from 5 to 19 years. It will be noted that the frequency of deaths for some causes fluctuates considerably from one age group to another. As the population was nearly the same in the three groups, the death totals indicate roughly the relative frequency of occurrence.

Among children 5 to 9 years of age, pneumonia caused the largest number of non-accidental deaths, followed by poliomyelitis, perhaps the most feared disease of childhood. However, deaths from accidents were more than three times as numerous as deaths from pneumonia and polio combined.

Among children 10 to 14 years of age diseases of the heart, with 656 deaths, ranked first among nonaccidental causes of death. The next most important cause, pneumonia, was responsible for 484 deaths, and tuberculosis caused 434 deaths. Accidents, however, caused five times as many deaths in this age group as diseases of the heart, and approximately seven times as many deaths as pneumonia or tuberculosis.

Tuberculosis, with 1,946 fatalities, was the leading cause of nonaccideital death among young people 15 to 19 years of age. There were 959 deaths from heart disease, the next most important cause, and 639 from pneumonia, the third cause. Again, accidents

were the outstanding cause of death, accounting for more than twice as many deaths as tuberculosis, pneumonia and heart disease combined.

Among school children 5 to 14 years old, preventive medicine has proved its effective power. In 1930, 19 out of 100,000 of these children died of pneumonia and influenza; in 1946, only 5 out of 100,000 died of these diseases. In 1930, 12 out of 100,000 died of tuberculosis; in 1946, fewer than 4. In 1930, 13 out of 100,000 died of appendititis, and 12 of heart disease; in 1946, only 2 out of 100,000 died of appendicitis and 5 of heart disease.

In 1930, 36 out of 100,000 children 5 to 14 years old, died of accidents; in 1946, 29, an improvement of only 19 per cent. This relatively small decrease indicates the need for more effective work in the field of accident prevention.

* * * * *

HIGH-FREQUENCY ACCIDENT LOCATIONS AND ACTIVITIES*

Kindergarten Through Third Grade—September 1947 to May 1948

The numbers opposite each accident classification indicate the frequency of the class as measured by the accident rates per 100,000 student-days. Those designated "1" had the highest rates; those designated "4" had rates much lower. Locations or activities which do not appear in the list did not, in any month of the school year, occur with sufficient frequency to warrant listing.

The accident rate for each month is given on the last line.

Location and Type	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
School Building									
Classrooms and auditorium	....	2	....	4	4	3	4	....	....
School Grounds									
Swings	3	....	....	....	....	....	....	....	....
Bars	3	....	....	....	....	....	....	....	....
Unorganized activities	1	1	1	1	1	1	1	2	1
Going to and from School									
Motor Vehicle	2	4	4	....	....	2	4	4	2
Home									
Falls	1	1	1	1	1	2	1	1	1
Burns	....	....	....	....	....	4	....	....	4
Cuts and scratches	1	1	2	4	3	2	2	3	1
Other									
Motor vehicle	2	1	2	2	3	2	1	3	1
Bicycle	3	....	....	....	....	....	....	....	4
Street and sidewalks	3	3	4	....	1	1	1	1	1
Playgrounds (not school)	....	....	....	....	....	....	....	....	3
Accident Rate (per 100,000 student-days)	**10.48**	**9.45**	**6.89**	**5.56**	**7.22**	**8.32**	**7.14**	**6.78**	**14.55**

*Follows page 272.

ANNUAL ACCIDENT SUMMARY

By JENNIE SPADAFORA

Member Statistical Bureau, National Safety Council

Motor vehicle accidents on the way to school occurred most frequently in September and May, and were relatively infrequent in other months.

Home falls, particularly important for children below fourth grade, retained their high frequency throughout the school year with a small reduction in February. Burns merited special attention in safety programs for February and again in May. Cuts and scratches of small children occurred irregularly. These injuries remained at the peak level during September and October, and decreased in November and December. A gradual increase in cuts and scratches was recorded from January through March with a slight decrease in April and an increase to the peak level again in May.

Motor vehicle accidents not on the way to school occurred irregularly. October, March and May had the highest frequencies, while January and April had frequencies, much lower. The most notable change occurred in April which had a frequency class of "3" as compared to "1" for both March and May. Bicycle injuries not involving motor vehicles were moderately numerous in Septemper, but did not merit special attention in safety programs for succeeding months until May.

Street and sidewalk accidents were moderately frequent in September and October, decreasing in November and December. However, they increased tremendously in January and remained frequent through May. Playground injuries away from school did not become prominent until May when they were rated "3."

The table* indicates that unorganized activities on the school grounds and falls in the home were the most frequent sources of accidents occurring to children from kindergarten through the third grade. Since small children spend a considerable portion of their time at home, more effective means must be found to control the hazards in the home. For this purpose a community safety campaign combined with the education of children in school should prove of value.

*See page 271.

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EDITORIAL

This is a Convention Editorial Report.

In the opinion of the members of the governing council—whose meetings were extremely well attended—this was the most successful meeting the American School Health Association ever held.

The Monday meetings of the Association; morning, afternoon, and evening were extremely well attended: morning session, 450 present; afternoon session, 500 present; evening session, 650 present.

The papers presented were of high quality and loaded with valuable information, which we shall later present to our readers.

At the Annual Dinner on Wednesday evening, William Howe Awards were presented to Miss Sally Lucas Jean and to Dr. Amos Biegler. The presentations and citations were made excellently by Dr. Clair Turner to Miss Jean and by Dr. Mildred Dostor to Dr. Biegler. The replies of the recipients were interesting, informative, and excellently done.

For a year or more the governing council has been considering the matter of dues and of subscriptions to the Journal of School Health. It was evident that income must be increased if we were to issue a worthwhile Journal. Since collection of subscription fees from institutions such as Libraries, Boards of Health, Boards of

Education, etc., is cumbered with official red tape and expensive of time, postage and affidavits, it seemed folly to sell these at less price than memberships. After long deliberation, the governing council voted to increase memberships and subscriptions to the same level of $3.00 annually from the former level of $2.00 for members and $1.75 for subscription; the increases effective immediately on all new ones and on all renewals as they occur.

As usual it was necessary to drop a considerable number for nonpayment.

For the first time the official representative on the governing council of the New York State School Physicians Association sat with the council. Their delegate is C. Adele Brown, M.D., of Oswego, N. Y.

The New Jersey School Nurses Association—some 240 members—applied for affiliation and was accepted. New Jersey was represented by Emily S. Brown, R.N., of Elizabeth, N. J.

The Association is to be congratulated on its new officers:

President, Cyrus H. Maxwell, M.D., Washington, D. C.

President-elect: William E. Ayling, M.D., Syracuse, N. Y.

Vice-President-Chairman of the Membership Committee: V. K. Volk, M.D., Saginaw, Mich.

Vice-President-Chairman of the Program Committee: Gertrude E. Cromwell, R.N., Denver, Colo.

More about these officers in our January Journal.—*C.H.K.*

* * * * *

Deodorants,—The use of deodorants in school buildings is not favored except in some rare cases. The deodorant simply substitutes one odor for another, and its use often encourages carelessness in cleaning. The well-kept building does not contain permanent objectionable odors. If toilets are smelly, the disagreeable odor should be traced to its source and eliminated at that point and not concealed by a deodorant.

Many toilet odors come from urinals that are not flushed often enough or are permitted to get filthy and scummy. If urine is spattered on an untreated concrete floor, it soaks into the floor and becomes a permanent source of bad odor. In an old building it may be necessary to chop out the section of old concrete that is saturated with urine to get rid of the trouble. The bad odor condition may be temporarily counteracted by coating this concrete portion with floor paint or a floor preservative such as is used for sealing wood floors. Abstracted from School Management, Nov., 1948, p. 19.

ABSTRACTS AND NOTES

Consultant Service for School Nurses,—Miss Mary M. Klaes, Director, Division of Public Health Nursing of the Delaware State Board of Health, in this article describes the development of nurses' consultant service by the department of health for the 29 school nurses employed by boards of education in Delaware.

From September 1936 to June 1942 a subsidy of 25 dollars a month towards school nurses' salaries was given to schools through Children's Bureau funds administered by the State Health Department. The school nurses' activities were reported to the county health units and resulted in closer cooperation between the schools and the health units. In 1945 because of additional funds available for school health services the Assistant State Superintendent of Education asked the Division of Public Health Nursing of the State Board of Health to give assistance to all school principals who employed nurses. The nursing director suggested that the State Department of Public Instruction employ a supervising nurse but as the increased budget was to be used only on a local level this was not feasible. Hence, the State Health Department supervising nurse and the supervising nurse in each of the 3 county health departments gave assistance to the school nurses when so requested by the school principals. This assistance was given without delegation of responsibility for the school health program which rested on the school administrators.

Annual institutes are held in each of the counties and the supervisor visits each nurse once a month at which time the principal of the school participates in part of the conference. Specially prepared literature on school problems is given the nurses and they have access to materials on school health available in the public health libraries. Sometimes this material is available as loan kits.

In planning the in-service program for the general public health nurse, topics of interest to the school nurse are included and the school nurses invited to the meetings.

Miss Klaes concludes "the consultant service has brought about a better understanding on the part of both school nurses and county health unit staff nurses of the respective health programs of both agencies. It has resulted in a closer working relationship to bring about improved health services for school children."—Abstracted by C. H. Maxwell.

Scurvy and Rickets,—The clinical application of fundamental principles of nutrition is not abreast of increasing knowledge of

nutrition. Infants with rickets or scurvy still appear frequently in the pediatric clinics of many of our teaching institutions. Recently a relatively small pediatric service admitted three infants with frank scurvy in as many months. The gratitude of the teaching staffs for such teaching material is exceeded only by the embarrassment of rationalizing the occurrence of such cases to the medical student. From his earliest days in medical school, the modern student has been taught that prophylactic administration of vitamins C and D should reduce scurvy and rickets to obsolescence.

Association of scurvy with poverty, malnutrition and lack of medical care is no longer entirely valid. Many recent cases have arisen in families of moderate economic circumstances and have demonstrated optimal gains in length and weight. Usually patients have been observed at regular intervals by physicians. Factors other than parental ignorance or economic circumstances must be at fault.

Almost uniformly these infants have been fed on proprietary preparations which are often represented as "complete infant foods". Indeed, the rapid gains in length and weight testify to the completeness of these foods — with the exception of vitamins. Because growth is occurring rapidly during infancy, requirements for vitamins must be fully satisfied; growth will cease if these demands are not met. As these preparations are usually fed under the direction of a physician, he must assume the responsibility of ascertaining specifically the vitamin content of these preparations in relation to the specific needs of the patient, regardless of the claims of the manufacturer, concerning the completeness of the food. Reliance on such preparations for appropriate intake of vitamins is unwise since quantities of the product fed from day to day and from patient to patient are highly variable. Oliver Wendell Holmes said, "A pair of substantial mammary glands have the advantage over the two hemispheres of the most learned professor's brain in the art of compounding a nutritive fluid for infants." Perhaps in these days when hypofunction of the postpartum breast is a national phenomenon, refuge in the cerebral hemispheres of the learned physician is necessary. Fortified with adequate knowledge of nutrition, he can eliminate scurvy and rickets from the American scene. Editorial: Journ. A.M.A., May 29, 1948, p. 466.

* * * * *

Trudeau Committee Reports on BCG,—Vaccination with BCG does not provide complete protection against tuberculosis and, until further controlled studies are conducted, cannot be recommended

for the general population. However, since BCG appears to provide some degree of protection, it is recommended for members of groups constantly exposed to tuberculosis if they have a negative reaction to the tuberculin test.

These conclusions are contained in a statement of policy adopted by the Executive Committee of the American Trudeau Society, medical section of the National Tuberculosis Association and published in the March issue of the NTA Bulletin. This is the first official statement by the ATS on BCG.

Dr. H. McLeod Riggins of New York, N. Y., Chairman of the ATS Chemotherapy Committee which prepared the report on which the statement is based, explained that BCG vaccination, developed by Calmette and Guerin from a non-virulent strain of tubercle bacilli, causes a primary tuberculosis infection. As a result of this infection, the body increases its resistance to the disease, inducing an artificial immunity of varying degree. A positive reaction to the tuberculin test, according to Dr. Riggins, indicates that a person has had a primary tuberculosis infection and his body has built up a degree of acquired immunity. Persons having a positive tuberculin test reaction probably do not benefit from vaccination with BCG, he said.

The statement emphasizes that further studies are necessary to determine the true value of BCG and points out that the vaccine cannot be regarded as a substitute for approved public health measures to protect the public from tuberculosis. Until additional information is obtained, vaccination of the general population cannot be recommended except for carefully controlled investigative programs, several of which are now under way. These programs, the statement suggests, are usually best carried out under the auspices of official agencies, such as the U. S. Public Health Service, state and municipal health departments and other especially qualified groups.

Although studies thus far made indicate that the incidence of tuberculosis may be reduced when groups likely to develop the disease because of unusual exposure to tuberculosis are vaccinated, the statement points out that the degree of protection afforded the individual is not complete and the duration of relative immunity is not known.

BCG vaccination is recommended for the following groups if they are subjected to more than ordinary exposure to tuberculosis: doctors, medical students and nurses; hospital and laboratory personnel whose work brings them in contact with the bacillus of tu-

berculosis; individuals who are unavoidably exposed to tuberculosis in the home and patients and employees of mental hospitals, prisons and other custodial institutions among whom the incidence of tuberculosis is known to be high.

Even with these groups, the statement warns against placing complete reliance on BCG for protection and points out that proper precautions should be taken to minimize or prevent "undue hazardous exposure of hospital patients and personnel and members of a household if an infectious patient is under treatment in the home."

While the vaccine, when prepared under ideal conditions and administered to tuberculin-negative persons by approved techniques, may be considered harmless, the statement does not advocate that BCG be made available for general distribution in the United States at present because: (1) the most effective strain of BCG has not been determined nor has satisfactory standardization of the vaccine been achieved, (2) the best qualified experts have not agreed as to the most effective vaccination procedure to employ and (3) fully satisfactory arrangements have not been perfected for transportation and storage of the vaccine.

It is further recommended that the vaccine be prepared only in laboratories especially devoted to this task and where virulent tubercle bacilli are not cultivated or handled and where all possible precautions are exercised to assure safety of the product.

"Fortunately, great advances have been achieved during recent years in the development of diagnostic methods applicable on a mass scale and there have been equally great improvements in the surgical and medical treatment of tuberculosis," the statement concludes. "The expansion of modern diagnostic and therapeutic facilities is required at this time to make full use of these new methods which can accomplish further dramatic reduction of tuberculosis mortality and morbidity rates in the United States.

"It is to be emphasized that BCG vaccination must not be regarded as a substitute for approved hygienic measures or for public health practices designed to prevent or minimize tuberculosis infection and disease. Vaccination should be regarded as only one of many procedures to be used in tuberculosis control. Vaccination seems unwarranted: (a) in areas in which the tuberculosis mortality rate is extremely low and (b) in localities in which the tuberculin test is of especial value as a differential diagnostic procedure." Itam, Illinois Tuberculosis Ass'n., April, 1948, p. 10.

Proper Upkeep of Resilient Floors—It is easier to clean them right than wrong,—The resilient flooring materials found in most of the nation's schools are among the hardest used surfaces in all of those buildings. Every day many active feet walk, scuffle, and stand on the classroom and corridor floors, and chairs are scraped and dragged over these surfaces. Every day lots of dust and dirt are tracked in.

In many cases school custodians work far too hard in taking care of their floors. They wash them too frequently and wax them too heavily. Actually, the proper care of resilient flooring, such as linoleum, takes less effort than improper methods of cleaning this type of flooring.

Because linoleum is probably the most widely used type of resilient flooring in schools, its care and upkeep will be discussed here. Linotile, asphalt tile, rubber tile, cork tile, and other types of resilient flooring found in schools require care similar to that of linoleum.

Sounds Easy!

A good rule to follow with linoleum is "the less washing, the better" and "the thinner the coat of wax, the better." Many maintenance men find it hard to believe that frequent scrubbings are not necessary for linoleum. As a result, they wash it too frequently. To help curb this tendency and to minimize the need for general washing, maintenance men should be notified soon after anything is spilled in a corridor or classroom so that they may wipe it up before it becomes sticky or is spread over a wide area by many feet. Linoleum floors should be swept or dry mopped daily. If this fails to remove all dirt, the floor should be wiped with a well-wrung mop. Then a thin coat of wax should be applied. When exceptional soiling occurs as it does on rainy or slushy days, a thorough washing is necessary.

Strong soaps should never be used to clean linoleum. They are the most frequent cause of floor trouble and do more harm than constant wear. Many strong soaps contain alkalis which attack and dissolve the oils in the linoleum, making it porous so that it catches dirt and eventually becomes brittle. Alkali also causes a chemical change in color pigments which may give the linoleum a faded look. Mild soaps are enough to do a good job.

Gritty cleaning compounds should never be used on linoleum. These cover the surface with a network of fine scratches that hold dirt and moisture. This causes discoloration and shortens the life of the flooring.

Whether mild soap or one of the special compounds for clean-

ing linoleum is used, lukewarm (not scalding) water should be employed and the solution applied with a mop or an electric scrubbing machine. Then the floor should be rinsed with clear cold water to remove all traces of the soap. When the floor has dried thoroughly, it is ready to be waxed.

Use Little Wax

As little wax as possible should be used. With a thin coat the wax quickly loses its moisture through evaporation. A thin, hard coating forms which helps resist wear and dirt penetration. However, when a thick coat is applied—and this is where many maintenance men make their mistake—the top of the film hardens but the wax under the surface stays soft and will catch and hold dirt.

Here is the recommended way to apply wax. Pour enough wax on the linoleum to cover several square feet. Spread it with a soft cloth or lamb's wool applicator, using straight back and forth strokes, not a circular motion. Because foot traffic is always excessively heavy in schools, two or three thin coats should be applied. Allow enough time between coats for each to dry thoroughly.

Once a school corridor has been waxed in this way, the only care necessary is rewaxing at reasonable intervals. Before rewaxing, the floors should be wiped lightly with a wrung-out mop to remove any dirt or soilage.

A high gloss can be produced on school floors by buffing the wax coating with an electric polishing machine. When more than one coat of wax is applied, each coat should be buffed.

Heavy school furniture, such as teachers' desks or tables which have casters or small feet, can dent linoleum. Furniture rests of plastic with wide, perfectly flat bottoms, which spread the weight of the furniture evenly over a larger area, are available. Some furniture rests have a swivel action which keeps the large surface flat even when the furniture is tilted. Round or square cups are available for larger furniture.

Linotile should be given approximately the same care and treatment that has been suggested for linoleum. High-grade asphalt tile can be washed with alkaline cleaners because it is alkali-resistant. Rubber tile, which is often used for certain areas such as study halls and libraries in schools, should be washed with a cleaning powder and then waxed. After that a dry buffing with No. 1 steel wool will preserve the high gloss characteristic of this material. Cork tile such as is found in some school libraries is normally maintained with the same water emulsion waxes used on linoleum. After each coat of wax is dry, the floor may be buffed with an electric polishing machine. School Management, Sept. 1948, p. 7

That It Pays to Be a Moron Is Hinted by Conn. Sociologist,— The typical moron is a semiskilled laborer who gets to work on time and earns more money than the average person with a normal I. Q., Dr. Ruby Jo Reeves Kennedy, chairman of the sociology department at Connecticut College, told the seventy-second annual meeting of the American Association on Mental Deficiency which convened at Boston, May 18-22.

In a paper on "The Social Adjustment of Morons" (I. Q. between 50 and 96) Dr. Kennedy declared that a profile of the typical moron shows, among other things, that the moron "Goes to the movies and prefers the cinema to any other form of recreation; reads a newspaper and magazine regularly, is an habitual listener to the radio, and, if a male, has participated in some form of military service, usually the army."

Dr. Kennedy's study was made in Middletown, Conn., in 1946-47, and indicated that the average moron is self-supporting, usually as a semiskilled laborer. The typical moron earns from $35 to $55 a week, she reported, while the typical female moron earns $30 to $45. Dr. Kennedy said that an employer regards the moron as "A generally satisfactory worker who gets to work on time, maintains friendly relations with fellow-workers and is regularly on the job. He shows up less favorably in his ratios for efficiency, learning ability, accuracy and speed," she said. "His poorest evidences as a worker appear in the unreliability of his judgment and in his learning rate." Dr. Kennedy reported that the average male moron has held 4.0 different jobs, the average female moron 3.5; both have been on the current (or last) job slightly more than a year.

"The average married moron," she continued, "maintains a home of his own, which he rents. He is saving some money, is paying for some kind of insurance, owns a radio and has a telephone in his house, but does not own a car. The typical female moron is similar in all these respects, except that she is not saving any money." Abstract from Mental Hygiene News, May, 1948.

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REVIEWS

"Fundamentals of Health and Safety,"—*Grover W. Mueller, B.P.E., M.P.E., M.S. in Ed and Elizabeth Chant Robertson, M.D., Ph.D.* D. Van Nostrand Co., Inc., New York, 1948, pp. 345.

This textbook designed for the secondary school age-grade level deals with personal hygiene materials, with considerable emphasis on structure and physiological functions.

Each chapter is followed by a group of questions of the essay type, some multiple choice questions and a list of interesting things to do.—*Chas. H. Keene.*

"Rural Health and Medical Care,"—*Frederick D. Mott, M.D. and Milton I. Roerner, M.D., M.P.H.* McGraw Hill Book Co., Inc., New York, 1948, pp. 608, price $6.50.

During recent years there has been a steadily increasing emphasis on the health conditions and health needs of rural areas and population. This comprehensive text gives further objectives and information in this field.

It is divided into eight major sections: Rural America—its population, economics and characteristics; Present Day Levels and Trends of Rural Health; Rural Doctors and other Health Personnel; Rural Health Facilities; Medical Services and Expenditures; Governmental Efforts to Improve Rural Health; Voluntary Health Programs; and The Road Ahead.

This excellent text should be a "must" for state and county health personnel and for those interested in rural health and social problems.—*Chas. H. Keene.*

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